



NOAA
FISHERIES

March 2015

Atlantic Highly Migratory Species Essential Fish Habitat 5-Year Review

HMS Advisory Panel meeting
March 10, 2015

Background

- The reauthorized Magnuson-Stevens Act requires the identification and description of EFH for all federally managed species (Section 305(b)(1)(A))
- Regulations require periodic review and revision of EFH in FMPs (50 CFR 600.815(a)(10))

Timeline of HMS EFH Actions

2006	Consolidated HMS FMP – Announced intent to revise EFH
2009	Amendment 1 – Completed initial 5-year review and update of EFH for Atlantic HMS
2010	Amendment 3 – Designated EFH for smoothhound complex Interpretive rule – Recognized roundscale spearfish, added species to the management unit, and designated EFH
2014	Atlantic HMS EFH 5-Year Review - Initiated
2015	Atlantic HMS EFH 5-Year Review - Drafted

Information Request: 10 EFH Components

1. Description and Identification of EFH
2. Fishing Activities that May Adversely Affect EFH
3. Non-Magnuson-Stevens Act Fishing Activities that May Adversely Affect EFH
4. Non-Fishing Related Activities that May Adversely Affect EFH
5. Cumulative Impacts Analysis
6. Conservation and Enhancement
7. Prey Species List
8. Identification of Habitat Areas of Particular Concern (HAPCs)
9. Research and Information Needs
10. Review and Revision of Components of EFH

Approach to EFH 5-Year Review

Request and Evaluate New Information

March 2014 – February 2015

- Published request for information (79 FR 15959)
- Evaluated changes to each of the 10 components since 2009
- Intra-agency scientific researchers reviewed draft findings

March 2015

- Published notice of availability of the draft 5-year review and requested comments by April 6 (80 FR 11981)
- Requesting comments from HMS Advisory Panel

Following the comment period

- HMS Management Division staff will respond to comments and finalize the 5-year review

If an amendment to the 2006 Consolidated HMS FMP is warranted

- Those conclusions will be included in the final 5-year review

Environmental and Management Changes

Deepwater Horizon (DWH) Oil Spill

- Could have caused or continue to cause impacts to HMS EFH
- Oil samples from DWH may impact cardiac development (Incardona et al. 2014) and juvenile heart cells in bluefin tuna (Brette et al. 2014)
- NOAA continues to study and assess the impacts of the oil spill

New England & Mid-Atlantic Fishery Management Councils

- Finalizing two habitat amendments

South Atlantic Fishery Management Council

- Focusing on Fishery Ecosystem Plans; a more holistic approach to management than individual species FMPs
- Amended the *Sargassum* FMP in 2012
- Amending the Coral FMP to expand several coral HAPCs

National Ocean Policy Initiatives

- Coastal and Ocean Resilience
- Science and Information



Atlantic Tunas Life History Update

Bigeye, Albacore, Yellowfin, and Skipjack (BAYS) Tunas

- Life history updates for BAYS tunas
- These updates did not warrant changes to current EFH boundaries for these species

Bluefin Tuna

- Life history updates to spawning behavior, egg/larval distributions, and general changes in biology due to DWH
- Tagging studies indicate changes to juvenile and adult distributions
- HMS Management Division staff analyzed and identified areas of high bluefin tuna interactions with pelagic longline gear when establishing Gear Restricted Areas in the Gulf of Mexico and Atlantic in Am 7, which could inform EFH analyses
- Changes in life history and distribution of individuals may warrant a revision to the current bluefin tuna EFH



Larval bluefin tuna



Adult bluefin tuna

Atlantic Swordfish Life History Update



- Life history updates to vertical movements, foraging behaviors, and lunar influences on migration patterns
- These updates did not warrant changes to current EFH boundaries

Atlantic Billfish Life History Updates

Species	Maximum			Mature		
	Length (cm)	Weight (kg)	Age (yr)	Length (cm)	Weight (kg)	Age (yr)
<i>Istiophorus platypterus</i>	260	60	12	185.6	28	5
<i>Makaira nigricans</i>	457	541	17	213	(238 lb) 108	4
<i>[Kajikia] albidus</i>	210	67.1	9	156.12	(48.5 lb) 22	1.5
<i>Tetrapturus georgii</i>	200	24	5	155		2
<i>Tetrapturus pfluegeri</i>	194	45	5	150	19	2

White Marlin

- Stable isotope analyses provided more data on prey species
- Updates to length at first maturity and larval distribution
- May warrant changes in the EFH life history description

Roundscale Spearfish

- Previously data-limited due to the lack of distinction from white marlin
- May warrant changes to EFH life history description and boundaries

Atlantic Billfish Life History Updates

Research suggests that the presence of billfish larvae is strongly linked to physiochemical attributes in Gulf of Mexico waters



Atlantic Sailfish

- Research in prey species and sailfish habitat utilization may warrant changes to sailfish EFH boundaries

Blue Marlin

- Several studies found that the northern Gulf of Mexico is an important area for spawning and early life stages of blue marlin
- Changes in the understanding of migration patterns and spawning within the Gulf of Mexico may warrant changes to the EFH boundaries

Longbill Spearfish

- Description of prey species previously data-limited. Stable isotope analyses provide more data on prey
- Updates to maximum size and size at maturity may warrant changes in the EFH life history description

Atlantic Shark Life History Updates

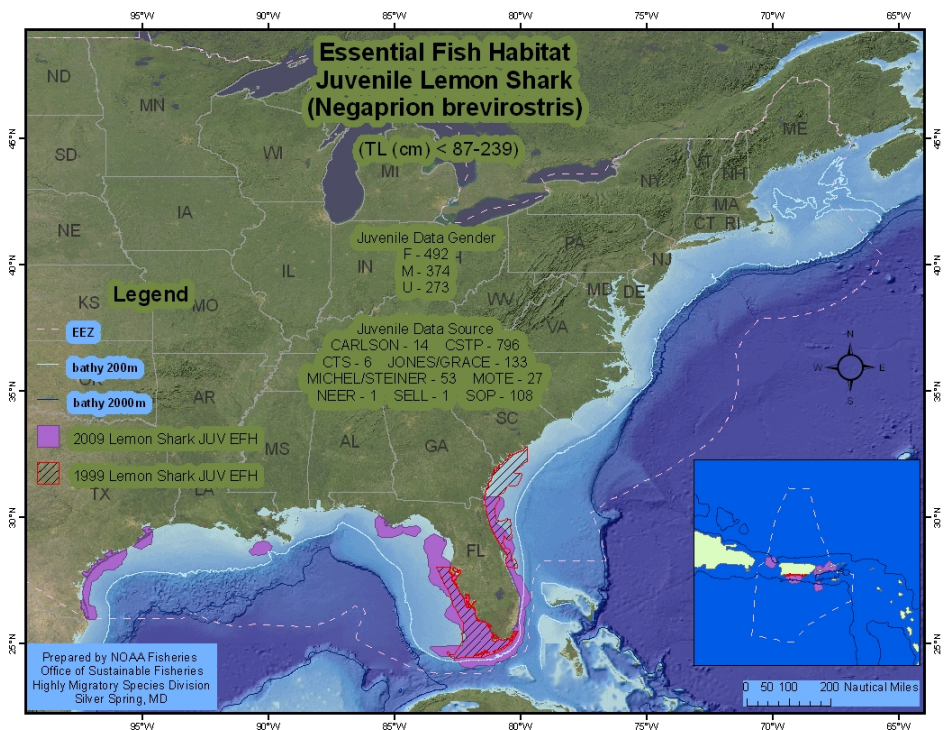
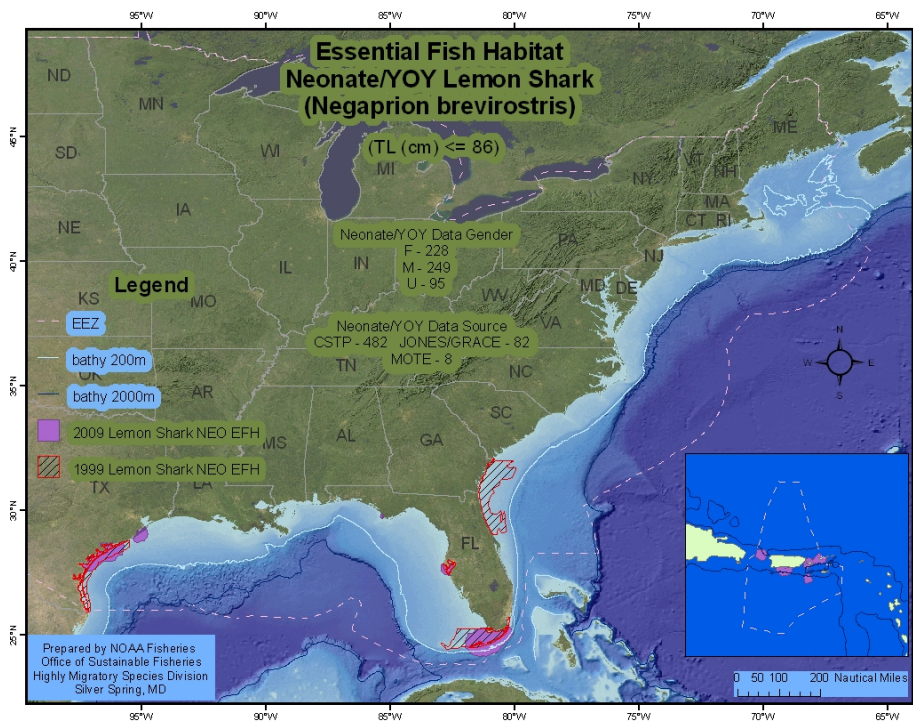
42 Species Reviewed in Document

- Included all large and small coastal and pelagic sharks
- HMS Management Division staff identified 18 species that may warrant EFH revisions
- Here we would like to highlight a few...



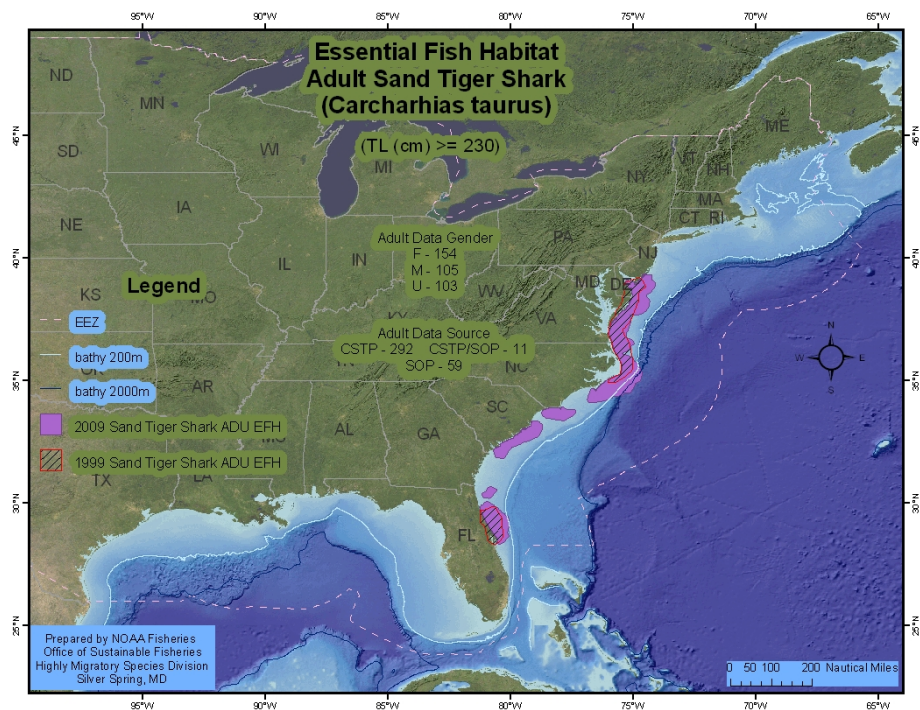
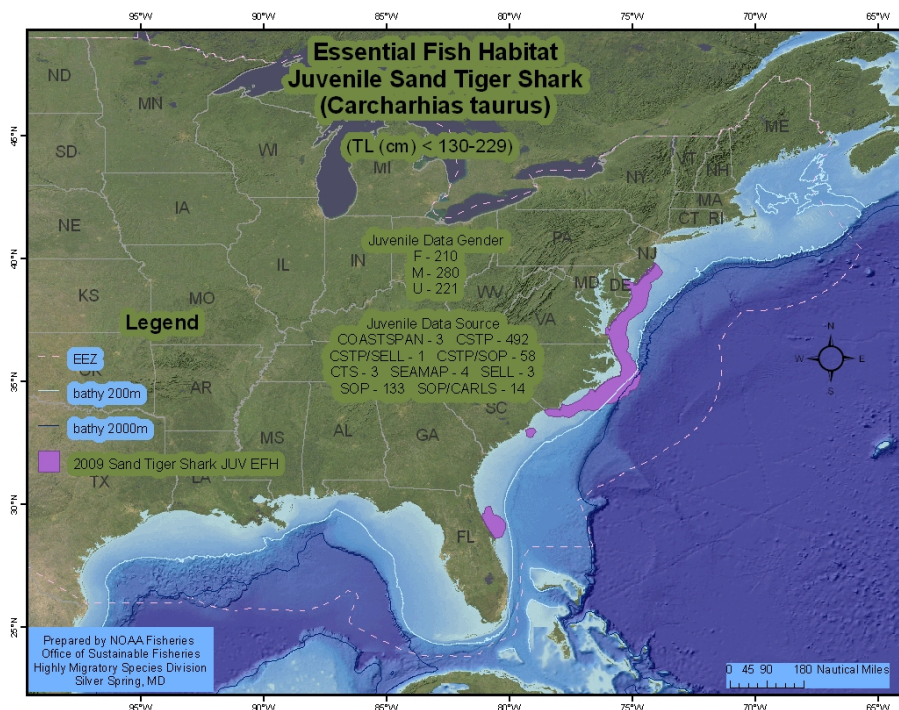
Lemon Shark Life History Updates

- Juvenile lemon shark habitat identified as far north as the Carolinas
- Possible nursery area identified around the Chandeleur Islands in Gulf of Mexico
- New nursery area also off Cape Canaveral



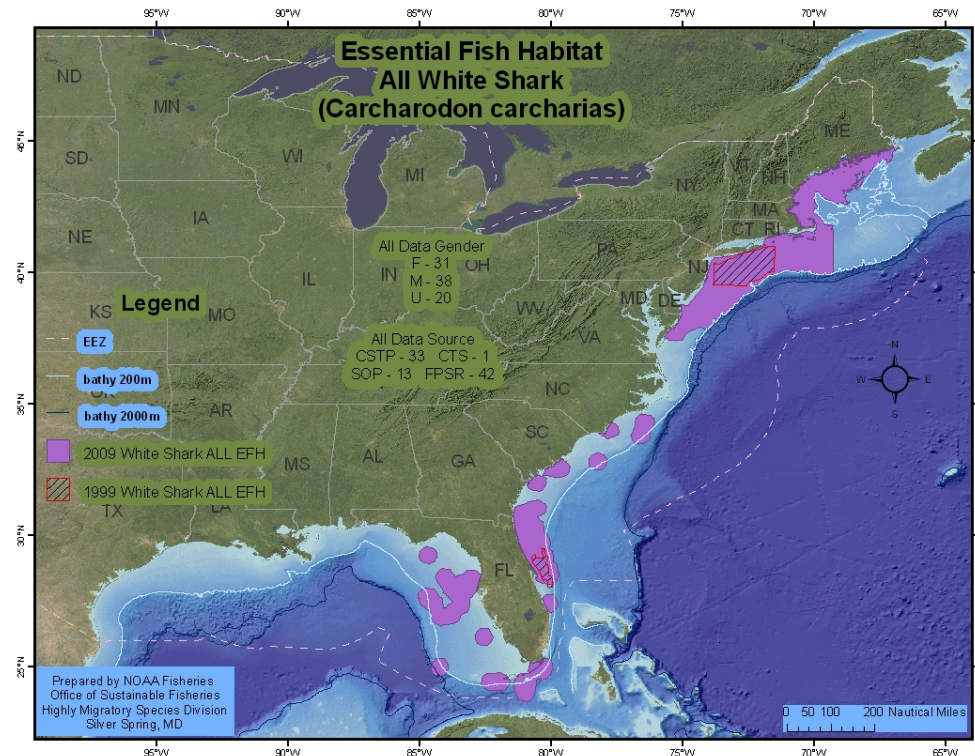
Sand Tiger Life History Update

- Tagging study suggests nursery habitat north of Cape Cod
- Tagging data supports well established and important migration route between North Carolina and Delaware Bay/Cape Cod
- Cooperative Atlantic States Shark Pupping and Nursery survey also noted extensive use of Delaware Bay for all life stages



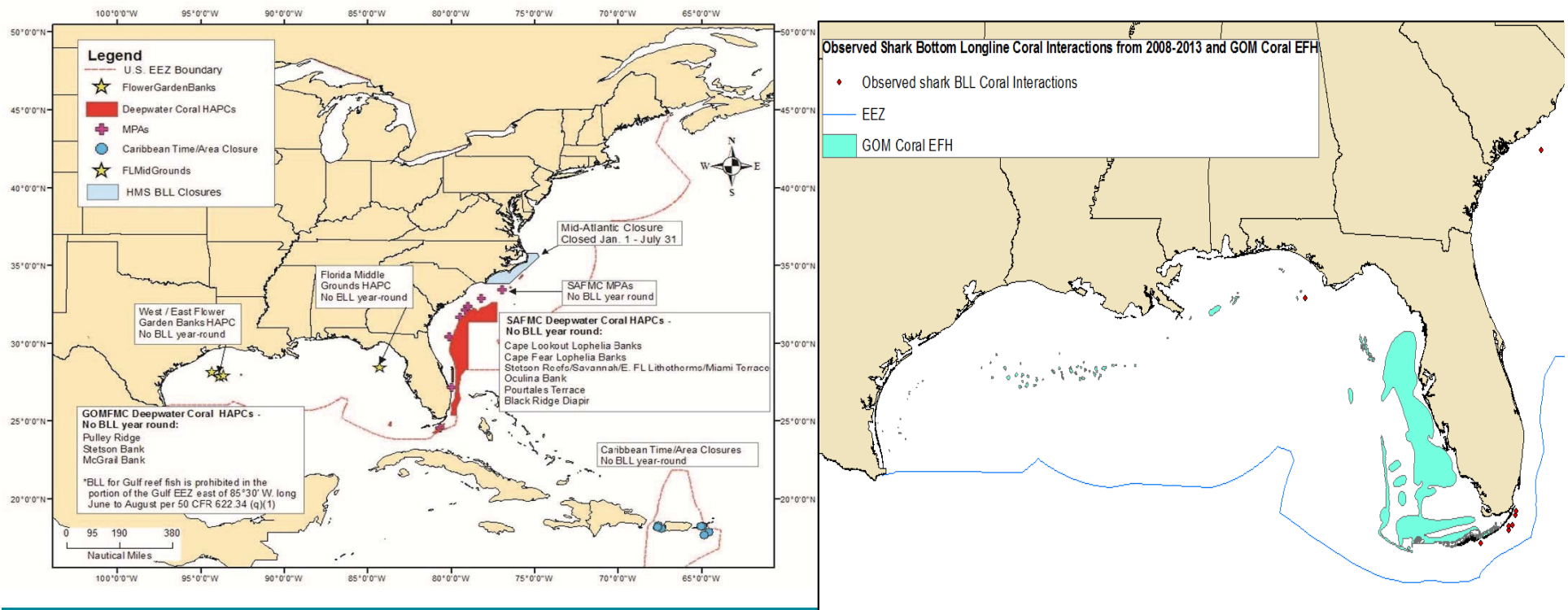
White Shark Life History Updates

- Large amount of tagging data available to the public
- Research showing continued importance of the northern Mid Atlantic Bight
- Increasing numbers aggregating off the coast of MA due to pinniped colonies
- New ageing research shows white sharks may live up to 70 years



Fishing Impacts to EFH

- Analysis of HMS gears did not demonstrate effects on HMS or Council-managed species EFH; same conclusion as Amendment 1
- Analysis of bottom longline gear indicated minimal impacts on deep and shallow water corals due to infrequent interactions



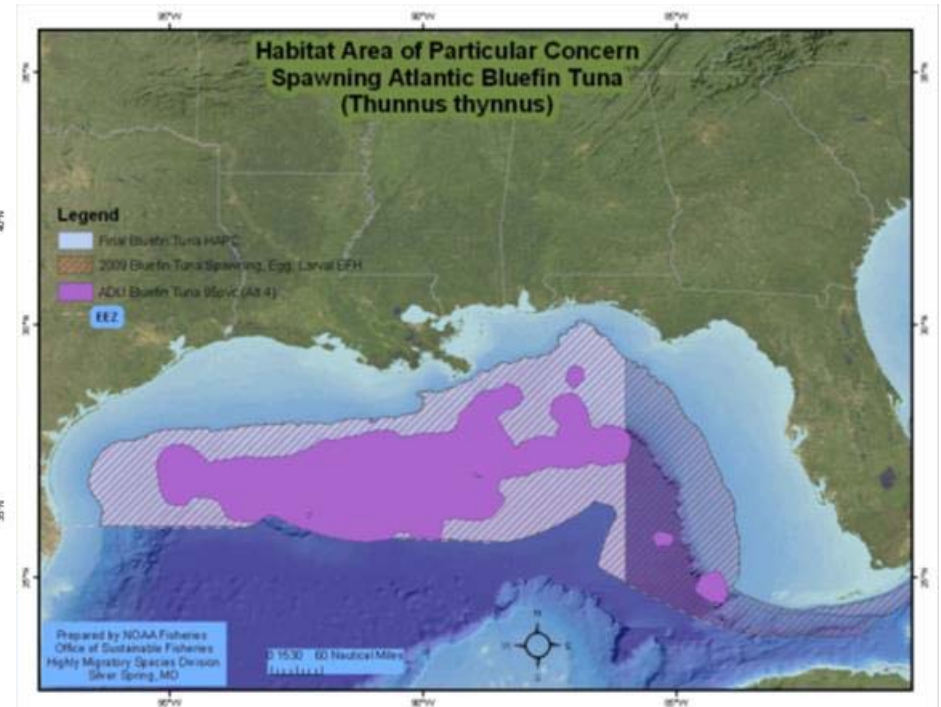
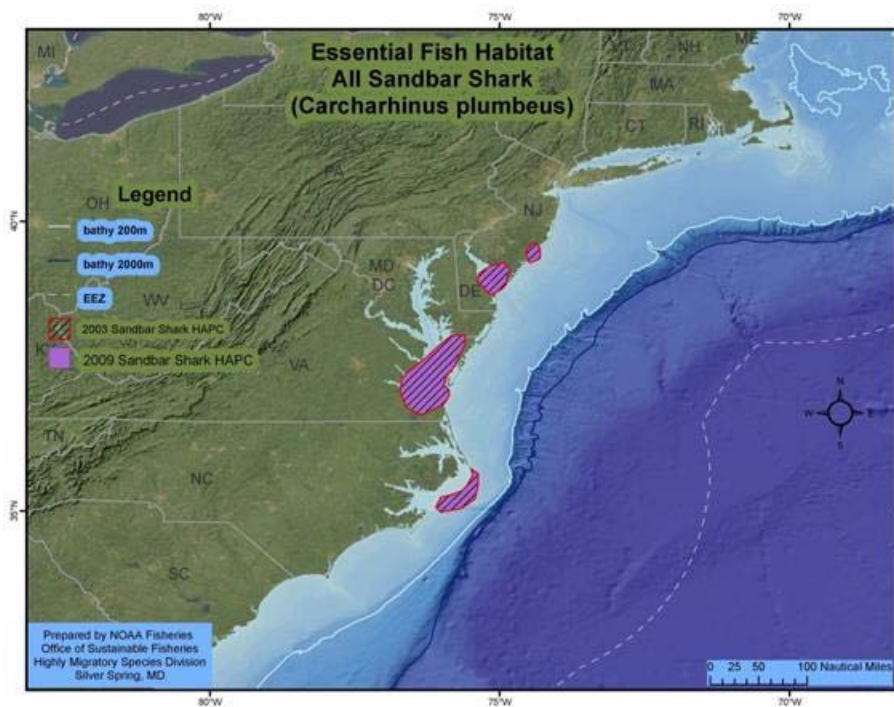
Non-Fishing Impacts to EFH

- Most non-fishing impacts do not affect HMS EFH
- Climate change will likely impact HMS EFH
- Insufficient information on climate change impacts at this time to warrant revision of HMS EFH



HAPC Consideration

- Potential new HAPC considerations could include: bluefin tuna, lemon shark, sand tiger shark, sandbar shark, and billfishes



Delineation of HMS EFH

- Research other methods of delineating EFH
- Describe pros and cons of the different methods
- Kernel Density Estimation / 95 Percent Volume Contour approach most appropriate for HMS EFH data
- Requesting comments on EFH delineation methodology

Process from here...

Comments due on the draft document by April 6, 2015

Electronic Submission

Docket: NOAA-NMFS-2015-0037

Mail

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Please mark the outside of the envelope "Atlantic HMS EFH 5-Year Review"

Final 5-year review document to publish mid to late summer with determination of whether an amendment to the 2006 Consolidated HMS FMP is warranted

Atlantic HMS EFH Review Team:

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Questions?

